

## REMARKS

### *Objections*

The specification has been objected to because the chemical structures for deoxycytidine and related molecules on pages 6-8 show an NH group, rather than the correct NH<sub>2</sub> group, on the C4 position of the pyrimidine ring. Applicants thank the Examiner for pointing out the error and have corrected the specification accordingly.

Claim 1 is objected to because "Chinese hamster ovary" should be written out prior to the first occurrence of an abbreviation, that is, "CHO." It has been corrected accordingly.

Claims 2, 5, 6, 13, 19, 20, and 21 are objected to as being dependent upon a rejected base claim, although allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Claims 2, 5, 6, and 13 ultimately depend on claim 1. The limitations of claim 13, which depends directly on claim 1, have been incorporated into claim 1, and claim 13 has been cancelled. Thus, claim 1 and claims dependent thereon are now in allowable form and notice to that effect is respectfully requested.

Claims 19-21 ultimately depend on claim 14. The limitation of claim 20, which depends directly on claim 14, has been incorporated into claim 14, and claim 20 has been cancelled. This amendment renders claim 14 and claims dependent thereon allowable. Applicants respectfully request notice to that effect.

### *Claim Rejections – 35 USC § 112, second paragraph*

Claims 26 and 28 are rejected under 35 USC § 112, second paragraph, as being indefinite. The Examiner suggests that replacing "mammalian" with "CHO" would overcome the indefiniteness. Claims 26 and 28 have been amended accordingly. Applicants respectfully request notice as to their allowability.

### *Claim Rejections - 35 USC § 102*

Claims 1, 9, 10, 12, 14, 15, and 22 are rejected under 35 USC § 102(b) as being anticipated by Tanigawa et al. (Journal of Fermentation and Bioengineering, Vol. 75, No. 4, pp. 254-258 (1993)). Tanigawa et al. disclose the enhancement of  $\beta$ -gal activity by adding 5-azacytidine to a culture of CHO cells stably expressing

$\beta$ -gal. Cells were grown in medium containing 10% serum (Tanigawa, p. 255, section headed "Treatment of cells with 5-azaC and assay of  $\beta$ -gal activity"), and serum-free medium is not described. Incubation temperature is not specified in this section. However, in the section entitled "Estimation of the rate of general protein synthesis," Tanigawa et al. (p. 256) specify the culture temperature as 37°C. Other culture temperatures are not disclosed.

Anticipation requires the disclosure of every element of the claim, either expressly or inherently, in a single prior art reference. *Verdegaal Brothers Inc. v. Union Oil Co. of California*, 1 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Independent claims 1 and 14 have been amended to overcome rejection on this ground, since they now include limitations not disclosed in Tanigawa et al. Amended claim 1 now includes a limitation specifying that the medium be serum free. Thus, claim 1 and claims dependent thereon (claims 9, 10, and 12) are not anticipated by Tanigawa et al, which does not disclose serum free medium. Consistent with this view, the Examiner has also pointed out that claim 13 would be allowable if rewritten in independent form (Office Action, page 2, item 6). Amended claim 1 incorporates the limitation of original claim 13 into claim 1 and, therefore, should be allowable. Further, amended claim 14 recites culturing mammalian cells at a temperature from about 29°C to 36°C, a limitation that Tanigawa et al. do not disclose. Therefore, claim 14, as well as dependent claims 15 and 22, is not anticipated by Tanigawa et al. In keeping with this, the Examiner has stated that claim 20 would be allowable if rewritten in independent form (Office Action, page 2, item 6). Amended claim 14 incorporates the limitation of claim 20 into original claim 14 and, thus, should be allowable. Applicants respectfully request withdrawal of the rejections on the basis of anticipation by Tanigawa et al.

#### *Claim Rejections - 35 USC § 103*

Claims 1, 3, 4, 7, 9, 10, 12, 14, 15-18, and 22 are rejected under 35 USC § 103(a) as obvious over Tanigawa et al. alone and over Tanigawa et al. in view of Lucas et al. (Nucleic Acids Research Vol 24, No. 9 pp. 1774-1779 (1996)). The Office Action states that these claims are obvious over Tanigawa since it would be obvious to substitute 5-aza-2'-deoxycytidine for 5-azacytidine because both cause demethylation of DNA. Lucas et al. disclose the production of recombinant antibodies and state that non-productive clones may be due to methylation of promoter elements. The Office Action states that Tanigawa et al. and Lucas et al.

together make these claims obvious because it would be obvious to activate a silenced promoter by adding 5-aza-2'-deoxycytidine.

A finding of obviousness requires that all elements of a claim be found in a combination of prior art references. MPEP § 2142.

As amended, the claims obviate this rejection. As stated above, amended claim 1 incorporates the limitation of original claim 13 (serum free medium) into claim 1, and amended claim 14 incorporates the limitation of original claim 20 (a culture temperature from about 29°C to 36°C) into claim 14. Since neither serum free medium nor a culture temperature from about 29°C to 36°C is disclosed in either Tanigawa et al. or Lucas et al., the cited references do not disclose all limitations of independent claims 1 and 14. Therefore, claims 1 and 14 and claims dependent thereon are not obvious over the cited references. In agreement with this view, the Examiner has stated that original claims 13 and 20 would be allowable if rewritten in independent form. Applicants respectfully request withdrawal of the rejection of claims 1 and 14 and claims dependent thereon for obviousness over the cited references.

#### *Other Amendments*

Claims 3-6, 16, 17, 19, 26, 27, 28, and 29 have been amended so that the phrase "at least one phosphate group" now reads "one or more phosphate group(s)." Applicants submit that these amendments do not alter the scope of these claims; they define the scope more clearly. Moreover, these amendments are fully supported by the specification at page 7-8, lines 23-30.

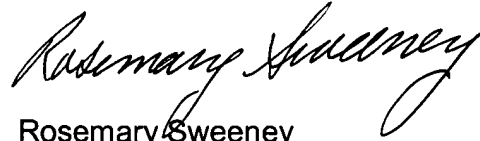
Claims 30 and 31 have been added. Claim 30 incorporates the limitations of original claims 2 and 3 into original claim 1, and claim 31 incorporates the limitation of original claim 5 into original claim 1. Since the Examiner has stated that claim 5 would be allowable if rewritten in independent format, Applicants submit that claim 31 claim is allowable and request notice to that effect. Since the Examiner has stated that claim 2 would be allowable if rewritten in independent form, new claim 30 is allowable, and Applicants respectfully request notice to that effect.

#### *Conclusion*

Applicants believe that all claims are now in condition for allowance and respectfully request notice to that effect. If the Examiner believes that any outstanding issues can be resolved via teleconference, he is invited to contact the

undersigned at the telephone number given below. Applicants thank the Examiner for his attention to this case.

Respectfully submitted,



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